PERCEPTUAL MAPPING OF INDIAN PAYMENT BANKS BRANDS USING MULTIDIMENSIONAL SCALING APPROACH

Dr.Prashant Gupta
Assistant Professor, SCMS,Dayananda Sagar University, Bangalore.

Abstract
Payment bank is the new way of Banking in India and there are five fully operational payment banks in India namely Airtel Payment bank, Paytm Payment bank , India Post Payment bank, Fino Payment bank , Idea Payment bank .This Paper tries to understand the fact that how customers are perceiving these Payment banks and thus perceptual mapping using Multidimensional scaling has been used. Findings are startling as Paytm Payment bank is the most trustworthy and high utility providing brand and has gained the ground despite the fact that Airtel Payment bank was first mover in the arena but couldn't harness its first mover advantage while others are yet to make the mark.

Keywords: Payment Banks, Perceptual Mapping, Multidimensional Scaling, First Mover Advantage.

Introduction

In September 2013 Reserve Bank of India constituted a committee under the leadership of Dr. Nachiket Mor keeping in mind "Comprehensive financial services for small businesses & low income households". The objective was to achieve financial inclusion and enhanced Financial Services. The committee submitted the report to RBI in the month of January 2014 and basic suggestion was to establish specialised banks called Payment Banks to meet the requirement of people of income groups and small businesses in such a manner that each Indian resident will have a global Bank account. That way this concept of Payment Bank took birth in India. A payments bank is such a bank which operates on a smaller scale without involving any credit risk and is similar to any other bank. In other words, it is involved in most of the banking operations but can't provide loans or issue credit cards. It is allowed to accept demand deposits (upto Rs. one lakh only) and offer remittances, mobile payments/transfers/purchases and other sort of banking services vis a vis ATM cum debit cards, net banking and also offer third party fund transfers. A payment bank is a registered public limited company under the Companies Act, 2013 and must has acquired a license under Section 22 of the Banking Regulation Act, 1949 and a special permit by RBI to operate as a payments bank.

Now the question is -Why do we need payments banks? and the answer is to widen the spread of financial services to small business, low-income households, migrant labour workforce in secured technology-driven environment, small farmers ,agricultural workers in the net of banking system so that their exploitation by the private money lender can be stopped and they can also be part of main stream financial system of India. Actually RBI wants to increase the penetration level of financial services to the remotest part of the country and using digitalization this is possible through payments banks.

Payment Banks make money through various ways like Cross selling and Bank Correspondents wherein Payments bank are not allowed to lend or open a subsidiary for lending money. So they enter in partnership with other organisation to sell their insurance, investments products, and loan services and thus earn money. Other way to make money is through POS and MDR in which Payment banks make money from transactions at the point of sale terminals and resultant MDR (Merchant discount rate).

RBI gave license to 11 payment banks. But there are 5 payment banks operational in India now- a- days. These payment banks are contemporary age banks which renders limited but highly accessible services. These banks hardly have a physical branch but works efficiently through the existing channel of vendors and shopkeepers. These banks bank on the online platform. They are providing a higher interest rate on savings in their savings account. Payments Banks are thought to be synonymous with prepaid wallets but are different from them. Though open E-wallets like M-Pesa by Vodafone , Pay Zapp by HDFC Bank, etc. allows users to perform transactions like withdrawal of cash at ATMs or banks and transfer funds but they are not offering any interests on money deposited with them. So they are simply online financial instruments used for storing money to enable transactions. While payment banks will provide interest on money in savings a/c along with other banking services except granting Loans and issuing credit cards.

Though the licences are given to 11 companies by RBI to start payment banks but there are only Five payment banks which are fully operational in India :
Airtel Payment Bank -It is the first entrant in the payment bank segment. After getting the license, Bharti Airtel has opened its payment bank through a subsidiary. Also, The Kotak Mahindra Bank has its stake in this bank. The Airtel Payment Bank

Research Paper
Impact Factor: 5.471
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

bank upon support of 1.5 million retailers across the country. Airtel as on date has 4 lakh banking points. It is more than all banks ATMs put together. At these points, a customer can withdraw or deposit money. Airtel Payment bank offers the interest rate of 5.5% on the money in its saving account which is higher than 3.5-4.0% interest rate offered by regular banks. It renders its services through UPI payment system which is is the most advanced mechanism of fund transfer and is free, instant and always available. Airtel Payment bank gives a free digital debit card in association with the MasterCard without any annual charge for this card. The bank opens your account instantly and requires only Aadhaar along with the fingerprints. A customer's Airtel number would be his bank account number and customer will also have Free Personal Accident Insurance cover of Rupees 1 lakh.

Paytm Payment Bank- The Paytm is another giant in the segment and is promoting its payment bank very fiercely. Its strength are its wallet customers which are being advised to shift into the payment bank. The bank became operational in December 2017.The Paytm Bank Network is smaller than the Airtel Bank. The interest rate offered by Paytm Payment bank is 4% on its saving account. but Paytm Payment Bank opens a zero balance account ,provides Free Insurance cover of Rs. 2 lakhs, it also offers Fixed deposit facility in partnership with the IndusInd Bank. It offers Free Digital Rupay Debit card. Customer can have a physical debit card on request.

India Post Payment Bank -Government of India launched the IndiaPost Payment bank services in the 650 post offices initially. Soon this bank would be available at most of the post office.India Post Payment bank gives different interest rate according to the deposit amount. For Deposit upto Rs 25,000 – 4.5% , for Deposit up to Rs 50,000 – 5% and Up to Rs 1,00,000 – 5.5%. Features of India Post Payment Bank includes a zero balance saving account , existing saving account with any of the post offices can be transformed to the Payment bank savings account which would fetch a better interest rate.

Fino Payment Bank- Fino Payment bank offers a range of services which are more than any other payment bank. Its offerings include current & savings accounts like others .It offers remittances, life & general insurance and bill payments, business correspondent (BC) lending and mobile banking through the BPay app. This payment bank is not investing in advertising and promotion.The strength of Fino Payment bank lies in the fact that it has its own branches at 410 places and has got 25000 banking points across India and has a tie up with BPCL petrol pumps. The Fino Payment bank gives an interest rate of 4% on the savings accounts.Its features includes minimal remittance charges at the rate of 1% for the remittance. The Fino payment bank joined hands with the ICICI Bank and The ICICI ATMs are mounted at the Fino branches. The Fino payment bank also offers personal loans and home loans of the ICICI Bank apart from selling the Fixed deposit, auto loans. This bank requires a minimum balance of Rs 1000 in the savings account. The Fino Payment bank is involved in cross-selling of the gold loan and insurance products.

Aditya Birla Idea Payment Bank-Idea Payment Bank has gone operational on 22 Feb 2018. However, the details are not out yet. Idea Cellular and Aditya Birla Nuvo own 51% and 49% stakes respectively in this Payment Bank.

This paper attempts to assess the how customers perceive these 5 payment banks. Here for creating perceptual maps Multi-dimensional scaling technique is used. Multi-Dimensional scaling analysis is used to map objects (brand) spatially, in such manner that the relative positions in the mapped space shows the degree of perceived dissimilarity between the objects (the farther in spatial space, the more dissimilar are the brands). Once the perceptual map is generated, the relative positioning of the brands, together with knowledge of the general characteristics of the brands, makes the researcher to identify the underlying dimensions of the perceptual map . Respondents evaluate brands in pairs, judging the overall dissimilarity between the paired brands. Respondents may either use rating (metric scaling) or rank-order (non-metric scaling) for evaluating the dissimilarity for each pairing brands. This is a major difference between MDS and both factors & discriminant analysis. Unlike factors & discriminant analysis, MDS asks respondents to rate brands on overall dissimilarity and not individual attributes. So respondents are asked a series of questions and for each product pair they are asked to rate dissimilarity. Multidimensional scaling involves three basic steps. No1, a scale of comparative distances amongst all pairs of stimuli is obtained. This scale is similar to the scale of stimuli which are obtained in any traditional paired comparisons method. The distances between each pair of stimuli are positioned on a distance continuum in this scale. As it happens in paired comparisons, the processes for obtaining a scale of comparative distances don't permit the true zero point determination. So, a comparative distance is not a distance in the usual sense but it is just a distance minus an unidentified constant. Next step involves estimation of this unknown constant. When the unknown constant is found out, the comparative distances can be transformed into absolute distances. In the last step, the dimensionality of the psychological space is to be identified as it is compulsory to account for these absolute distances determined, and the estimates of these stimuli on axes of this space are attained. So a set of analytical procedures was developed for all these three steps and a least-squares solution is also carried out for obtaining comparative distances by three complete method of triads namely two methods for estimating the required additive constant, and other method is an extension of Young and Householder's Euclidean model

for obtaining the estimates of stimuli on axes from the absolute distances. As yet hardly any study for had been conducted on consumers perceptual mapping for Payment Banks. This research suggests that Paytm Payment Bank is most trusted and sought after brand in this payment banks market. Airtel Payment Bank, despite being first Payment Bank launched in India is trailing. Fino , Idea and India Post payment Bank have hardly trickled down and occupied the mind space of customers.

Review of literature
Perceptual mapping has its synonym as positioning map and it is very useful to develop market positioning strategy for goods and services. It is being used as a strategic marketing tool for about four decades (Green and Wind, 1975). Perceptual mapping depicts a map which helps understanding market structure. Also it helps in investigating the complex interactions among competitors in marketplace and also acts as a tool to understand the criteria used by buyers in making purchase decisions. Its powerful graphic simplicity appeals to all level of management especially senior management and kindle strategic thinking and deliberations at all levels in any of the organizations. Jawarharlal and Kumar (2004) said that Perceptual mapping is a tool that enables the researchers in marketing domain visually show customers' perceptions about products & brands, their attributes. DeSarbo and Rao (1984); Wind (1982) opined that Perceptual mapping is used to satiate marketing and advertising information requirements pertaining to product positioning and competitive market structure (Srivastava et al.,1984).

The consumers will pay attention and purchase such brands owning special attributes and features in their product family. Customers will use the brands which they perceive are unique in terms of their positioning and will advocate such brands to others for use also (Aaker, David A., Rajeev Batra, and John G. Myers (1992). Normally consumers perception about the different brands is different and this perception is framed on the basis of benefits offered by the brands and accordingly they can be positioned on perceptual map. The term Positioning here means the distinctive place which is being occupied by the brand in the mind of costomer (Ramanuj Majumdar, 2008). Ries and Trout (1986) contributed the concept of positioning in the field of marketing. They opined that positioning is the act of occupying a distinctive and unique image in the target market's mind. In fact, Brand positioning is such a relative concept which is conceptualized with comparative assessment of one brand with others. The key issue in positioning the brand lies in recognising the uniqueness in the product and the association of the customers with a brand is called as brand positioning (Aaker, David A., Rajeev Batra, and John G. Myers (1992).

The positioning of the brands can be done by placing the competing brands of the a product category on a comparative rating scale and Multi-dimensional scaling is a strong statistical tool used to analyse the data by map to comprehend consumer's reactions to product liking for brand positioning. It had been used very often in positioning a brand against its competing brand (Marcus J. Schmidt, Seven Hollensen, 2006).

Multi-dimensional scaling tries to plot the data in the format of a map which will indicate the similarities and dissimilarities as the distances between points (Inger Borg, Patrick J.F Groenen, 2005). The best part of MDS is that it paves the path for identification of the various dimensions of a brand positioning on the perceptual map (Naresh K. Malhotra and Satyabhushan Das, 2011).

Research Objectives
The basic objective of this study is to create a perceptual map using metric Multidimensional Scaling and understand the various dimensions which are of great significance for consumes when they use payment banks.

Research Methodology
In this exploratory study respondents were asked to evaluate level of dissimilarities among select Payment Banks using their own criteria of judgement. I have used Judgmental sampling and data from 225 respondents was collected and only 195 respondent's data was used for analysis after excluding the cases with missing values. Respondents were the individuals with payment bank account & who have used various payment banks understudy, at least once. Self-designed Structured questionnaire was used for data collection. Questionnaire was intended to fetch the respondents' perception dissimilarity data. For this purpose, total 10 pairs were formed for five objects. These pairs were subject to respondents' rating on 7 point likert scale (1- very dissimilar, 7-very similar) in terms of degree of dissimilarity between two objects. Data was subject to aggregate level analysis using the Proximity Squares Scaling (PROXSCAL) in SPSS17.

Kruskal and Wish (1978) opined that the number of potentially useful pairs for any data set can be calculated by the equation $D \leq K(K-1)/2$, where D= number of pairs, K= number of objects (in this case K=5). Using this formula, optimal number of pairs for this study seems to be 10. These similarity judgments were then presented in a matrix format to the respondents. A single triangular distance matrix was then constructed with integral values by averaging consumers'

Research Paper
Impact Factor: 5.471
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

judgment matrix to an approximated figure. The particular distance matrix has been treated as input data to be analysed by SPSS.

Here the reason to use MDS was to develop a perceptual map which best fits the data obtained to minimum number of dimensions. Here two dimensions are shown by SPSS output as when an elbow criterion of scree plot is used & it showed only 2 dimensions are sufficient. Moreover a two dimensional map is easy and efficient to interpret the results correctly. Hence, in this study numbers of dimensions chosen were two.

Statistical Analysis and Results
To attain the objective of this study, Multi-Dimensional Scaling is used to identify the difference in payment bank's perception amongst the customers. First of all, goodness of fit has been analysed Table 1 and the value of S-stress is found out to be 0.0121 which clearly tells that goodness of fit for the model is high. Dispersion Accounted for (DAF) value also shows its value as 0.994 which again shows that Goodness of fit is very High in the model.

Table 1 : Stress and Fit Measures	
Normalized Raw Stress	.00503
Stress-I	.07091a
Stress-II	.26223a
S-Stress	.01212b
Dispersion Accounted For (D.A.F.)	.99497
Tucker's Coefficient of Congruence	.99748
PROXSCAL minimizes Normalized Raw Stress.	

Also the Perceptual Map drawn here is the output of SPSS which clearly shows that Paytm is perceived very high in terms of trustworthiness and utility by the customers. Airtel despite being first Payment bank Brand in the market is not perceived trustworthy but is high in terms of Utility. Rest of the three other Payment Banks are still to gain their footing in the mind space of customers.

Object Points

Perceptual Mapp for Payment Banks in India
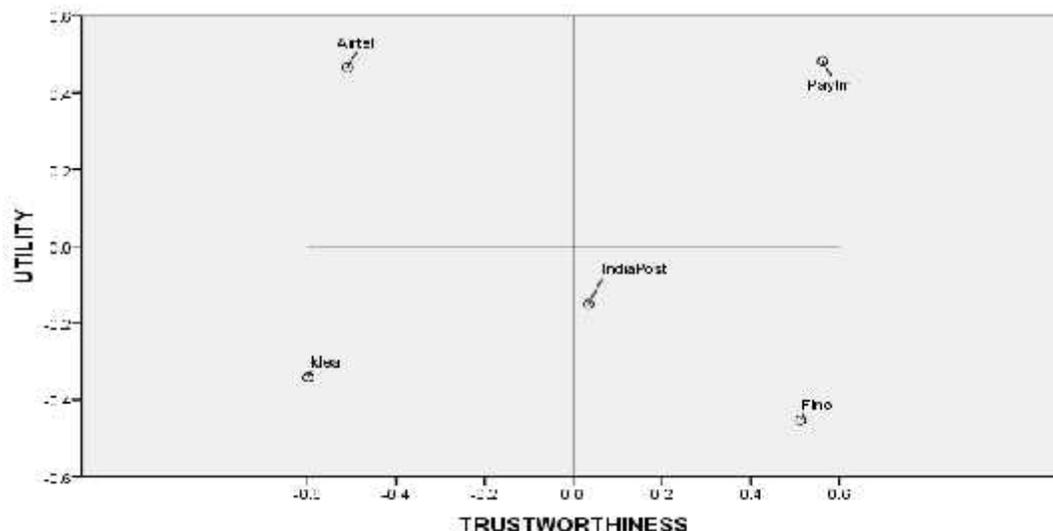
Conclusion

Result of the study clearly depicts that there lies a big difference in the perception of customers among the different payment banks operating in the country. Customers look forward for Utility and Trustworthiness as two major and emerging important factors while building positive perception about payment Banks. Fino and India Post can grow in market by offering high differentiation in terms of adding new service elements along with providing better quality and trust in terms of security of transactions while delivering the current service and they have to induce more information and awareness about the services and new plans. Payment Banks is not well diversified so retaining customer is one of the important strategies available to Payment Banks Brands in order to remain competitive. Though the industry is currently in nascent stage in terms of coverage and customer base, retaining customer should be an attractive option than attracting new customers since it is less expensive. The reliability of the Payment Banks Brands play an important role in influencing overall quality as perceived by the customers. Airtel Payment bank has to understand this stark reality and must take certain measures to improve their trustworthiness which it has lost after Unique Identification Authority of India (UIDAI) has temporarily barred Airtel Payments Bank from carrying out Aadhaar-based e-KYC of payments bank customers stating the reason that Aadhaar- eKYC based SIM verification process is being used to open payments bank accounts of its subscribers without taking 'informed consent' of the customers. RBI also fined Airtel Payments Bank Rupees five crore citing the reason that KYC norms were violated. This has hit the Trustworthiness of Airtel Payment bank in market but customers still think THAT Airtel Payments Bank offers high Utility and that's why there is quite good opportunity for this brand to bounce back. Paytm has to maintain its point of Differentiation to stay ahead in the fray.

References

1. Kotler, P. (2003) Marketing Management 11th Ed. Pearson Education, New Delhi.
2. Lovelock, C., Wirtz J & Chatterjee J. (2007) Services Marketing: People, Technology,Strategy- A South Asian Perspective 5th Ed. Pearson Education, New Delhi.
3. Ahmad, J & Naser, K. (2002) "Customer Satisfaction and retail banking: An assessment of some of the key antecedents of customer satisfaction in retail banking" International Journal of Bank Marketing, Vol. 20, Iss:4/5, pp146.
4. Inger Borg, Patrick J.F groenen, Modern Multi-Dimensional Scaling, Second edition,Springer, 2005.
5. Aaker, David A., Rajeev Batra, and John G. Myers (1992). Advertising Management,4th ed. Englewood Cliffs, NJ: Prentice-Hall, Inc.
6. Ramanuj Majumdar, Product management in India, PHI, 3rd edition, 2008.
7. Ries, A.,& Trout, J. (1986). Positioning: The Battle for Your Mind. New York, NY:McGraw-Hill.
8. Marcus J. Schmidt, Seven Hollensen,Marketing Reserch: An International Approach,Perason Education, 2006.
9. https://economictimes.indiatimes.com/definition/Payments-banks (browsed at 6.30 am 30/04/2018).
10. https://www.indiapost.gov.in/Financial/Pages/Content/IPPB.aspx (browsed at 6.30 am 30/04/2018).
11. https://www.businesstoday.in/money/banking/how-paytm-payment-bank-airtel-payment-bank-are-different-from-normal-banks/story/265031.html (browsed at 6.30 am 30/04/2018).
12. https://www.feedough.com/payments-bank/ (browsed at 3.00pm 03/05/2018).
13. http://www.thehindu.com/business/Industry/uidai-suspends-airtel-airtel-payments-banks-ekyc-licence/article21822439.ece (browsed at 5 am 05/06/2018).